

## **CW BEAM FORMER IN AN ASIC**

### **ABSTRACT OF THE DISCLOSURE**

The present invention relates to a continuous wave Doppler beam former application specific integrated circuit (CW-ASIC). The beam former may be a transmit or receive beam former. In one mode the CW-ASIC applies to a continuous wave Doppler beam former application specific integrated circuit for use in a diagnostic medical ultrasound system comprising a plurality of channels forming a CW analog receive path wherein each channel is connected with a digital beam former, the plurality of channels are mixed down in quadrature to base band using a mixer and a local oscillator (LO) generated in quadrature, the outputs of said mixer are summed and wall/high pass filtered to provide a beam formed base band signal, and a sub circuit providing a digital serial control function to interface to a real time control bus providing per channel enable/disable of said mixer and said local oscillator generator, and local oscillator delay as well as global local oscillator frequency select, said digital serial control also having an external delay enable signal to start said LO generators and synchronize all the internal LO delays. The beam former on an ASIC also includes a ultrasound system on a ASIC.

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